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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019

FLOODPLAIN SOIL/SEDIMENT SAMPLING AND ANALYSIS SUMMARY REPORT

CORNELL DUBILIER ELECTRONICS SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

Prepared by

Superfund Technical Assessment and Response Team
Roy F. Weston, Inc.
Federal Programs Division
Edison, New Jersey 08837

Prepared for

U.S. Environmental Protection Agency
Region II - Removal Action Branch
Edison, New Jersey 08837

DCN #: START-02-F-03681
TDD #: 02-99-08-0019
EPA Contract No.: 68-W5-0019

Approved by:

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M. Mahnkopf
Michael Mahnkopf
Project Manager

Date: 01/17/02

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Dan Crouse
Dan Crouse
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Date: 01-17-00

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Eric Wilson
On-Scene Coordinator

Date: _____

202896





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1.0 BACKGROUND

The Cornell-Dubilier Site is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey (Attachment A, Figure 1). The site is approximately 25 acres in size. Facing Hamilton Boulevard are several buildings currently occupied by approximately 15 businesses. The rear of the property consists of an open field and adjoining wetlands. The facility is currently known as Hamilton Industrial Park.

The site is bordered by Hamilton Boulevard to the northwest, Spicer Avenue to the southwest, a wetlands area to the southeast, the Bound Brook and Conrail railroad tracks to the northeast. The Bound Brook traverses the southeast section of the site.

Cornell-Dubilier operated at the site from 1936 to 1962, manufacturing electronic components, including capacitors. It is alleged that during its operation, Cornell-Dubilier disposed of polychlorinated biphenyl (PCB) contaminated materials and other hazardous substances at the site.

Previous investigations have identified PCBs and heavy metals at the Cornell-Dubilier site and in the Bound Brook downstream of the site. Water, sediment and fish samples were collected from the Bound Brook at one (1) location adjacent to the site, three (3) locations between the site and New Market Pond, and two (2) locations in New Market Pond. Samples were also collected from one (1) location upstream of the site.

Sampling events were conducted on neighboring residential and commercial areas in June and October, 1997 and April and May, 1998. The purpose was to identify off-site migration of contaminants from the Cornell-Dubilier site on these surrounding areas.

Sampling events were conducted along the Bound Brook in August, September, October, November and December, 1997 to identify PCB contamination upstream, midstream, and/or downstream of the Cornell-Dubilier site.

2.0 OBJECTIVE/SAMPLING APPROACH

The objective of this investigation was to characterize PCB contamination in the floodplain of the Bound Brook in Reaches 5 and 6 (as defined in the "Soil And Sediment Sampling And Analysis Report; Cornell Dubilier Electronics - Bound Brook", dated 09/07/98). Reaches 5 and 6 had the highest mean surface soil PCB concentrations of the areas investigated in August through December 1997.

The areas chosen for this investigation were selected based on their proximity to high use areas. This data will be used for risk assessment and to determine if additional investigations are required to evaluate health concerns.

In accordance with the June 16, 1999 Floodplain Sampling QA/QC Work Plan (DCN: START-02-F-03620), surface (0-2") soil samples were collected from Areas 1-4 described below.

- Area 1. Veteran's Memorial Park, bordered by Cedar Brook to the north, residential properties located on Kaine Street to the east, and Bound Brook to the south. Thirty-four (34) surface soil samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 120' spacing.
- Area 2. Area located on the north side of Cedar Brook, between Lowden and Oakmoor Avenues. Seventeen (17) surface soil and four (4) surface sediment samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 75' spacing.
- Area 3. Area located on the north side of Bound Brook in the vicinity of Fred Allen Drive. Twenty-eight (28) surface soil samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 75' spacing.
- Area 4. Area located adjacent to stream 14-14-2-3 (as identified on the Flood Insurance Map for the Township of Piscataway), south of New Market Avenue and 525' east of Highland Avenue. Nineteen (19) surface soil and two (2) surface sediment samples were collected from this area of concern. Sample locations were determined in the field utilizing a systematic sampling scheme based on 50' spacing.

Results of the screening soil samples will be evaluated to determine if additional sampling is required to delineate the horizontal extent of PCB contamination or assess risk.

3.0 SAMPLING & ANALYSIS

Soil sampling activities were performed on June 21, June 22 and June 23, 1999 by the following personnel:

- 1. Eric Wilson - USEPA, Region II
- 2. Michael Mahnkopf - START, Region II
- 3. John Brennan - START, Region II
- 4. Patrick Austin - START, Region II
- 5. Jeremy Sawetz - START, Region II

All soil samples were collected utilizing dedicated plastic scoops and/or spatulas. All soil samples were analyzed by Southwest Labs of Oklahoma, 1700 West Albany, Suite C, Broken Arrow, OK, 74012, (918) 251-0545.

For additional information, see the June 29, 1999 Trip Report included as Appendix 2 and project logbook # START-02-209.

3.1 Area 1

Pursuant to the procedures discussed above in Section 2.0, thirty-two (32) surface (0-2") soil samples (A1-01 through A1-18, A1-20 through A1-32, A1-34) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 2.

QA/QC samples included the collection of two (2) field duplicate samples (A1-19 was the duplicate of A1-18; A1-33 was the duplicate of A1-32) and two (2) matrix spike/matrix spike duplicate samples (A1-20 MS/MSD; A1-29 MS/MSD). Samples A1-19, A1-33, A1-20 MS/MSD and A1-29 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A1-01 through A1-34 exhibited total PCB concentrations which ranged from non-detect (A1-34) to 25 ppm (A1-26). Aroclor-1254 accounted for the total concentration of PCB detected in all samples except A1-14. Aroclor 1248 and Aroclor 1254 were detected in sample A1-14 at 0.21 ppm and 0.17 ppm respectively. Analytical results are summarized in Table 1 and the laboratory Form I's and data validation results are included as Appendix 3.

3.2 Area 2

Pursuant to the procedures discussed above in Section 2.0, sixteen (16) surface (0-2") soil samples (A2-01 through A2-011, A2-13 through A2-17) and four (4) surface (0-2") sediment samples (A2-18 through A2-21) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 3.

QA/QC samples included the collection of one (1) field duplicate sample (A2-12 was the duplicate of A2-11) and one (1) matrix spike/matrix spike duplicate sample (A2-06 MS/MSD). Samples A2-12 and A2-06 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A2-01 through A2-21 exhibited total PCB concentrations which ranged from 0.060 ppm (A2-18) to 2.0 ppm (A2-17). Aroclor-1254 accounted for the total concentration of PCB detected in all samples. Analytical results are summarized in Table 2 and the laboratory Form I's and data validation results are included as Appendix 3.

3.3 Area 3

Pursuant to the procedures discussed above in Section 2.0, twenty-six (26) surface (0-2") soil samples (A3-01, A3-03 through A3-23, A3-25 through A3-28) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 4.

QA/QC samples included the collection of two (2) field duplicate samples (A3-02 was the duplicate of A3-01; A3-24 was the duplicate of A3-23) and two (2) matrix spike/matrix spike duplicate samples (A3-04 MS/MSD; A3-21 MS/MSD). Samples A3-02, A3-24, A3-04 MS/MSD and A3-21 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A3-01 through A3-28 exhibited total PCB concentrations which ranged from 2.5 ppm (A3-21) to 7.5 ppm (A3-14). Aroclor-1254 accounted for the total concentration of PCB detected in all samples. Analytical results are summarized in Table 3 and the laboratory Form I's and data validation results are included as Appendix 3.

3.4 Area 4

Pursuant to the procedures discussed above in Section 2.0, eighteen (18) surface (0-2") soil samples (A4-01 through A4-08, A4-10 through A4-19) and two (2) surface (0-2") sediment samples (A4-20, A4-21) were collected and analyzed for total PCBs. Soil sample locations are shown on Figure 5.

QA/QC samples included the collection of one (1) field duplicate sample (A4-09 was the duplicate of A4-08) and one (1) matrix spike/matrix spike duplicate sample (A4-10 MS/MSD). Samples A4-09 and A4-10 MS/MSD were analyzed for total PCBs.

Analytical results indicate soil samples A4-01 through A4-21 exhibited total PCB concentrations which ranged from non-detect (A4-01, A4-02, A4-06, A4-13, A4-18, A4-21) to 0.21 ppm (A4-15). Aroclor-1254 accounted for the total concentration of PCB detected in all samples. Analytical results are summarized in Table 4 and the laboratory Form I's and data validation results are included as Appendix 3.

4.0 CONTROL POINT LOCATIONS

In order to document sample locations, several control points were established in Areas 1 - 4 as follows:

Area 1. Two (2) control points were established utilizing existing structures. Utility pole # 6309SPF served as control point 1 (C1). Utility pole # 7855 served as control point 2 (C2) and was located 480' north of C1. C1 and C2 formed the baseline for 120' grid spacing in this area. See Figure 2 for control point locations.

- Area 2.** Fence posts were installed along the centerline of the Cedar Brook and designated as control points. Control points 1, 2 and 3 (C1, C2, C3) were installed at the designated 0', 300' and 525' intervals respectively. C1, C2 and C3 formed the baseline for 75' grid spacing in this area. See Figure 3 for control point locations.
- Area 3.** Fence posts were installed along the centerline of the Bound Brook and designated as control points. Control points 1, 2, 3 and 4 (C1, C2, C3, C4) were installed at the designated 0', 300', 600' and 900' intervals respectively. C1, C2, C3 and C4 formed the baseline for 75' grid spacing in this area. See Figure 4 for control point locations.
- Area 4.** Two (2) control points were installed in Area 4. Control point 1 (C1) was installed 100' west of the centerline of stream 14-14-2-3 and 14.5' west of utility pole #63498 and is located at the south edge of the sidewalk (south side of New Market Avenue). Control point 2 (C2) is located 290' south of C1. The line formed by control points C1 and C2 is perpendicular to New Market Avenue and serves as the baseline for a 50' sampling grid for this area. See Figure 5 for control point locations.

On June 25, 1999, locational data was obtained for all control points discussed above using a global positioning system (GPS) unit operated by a representative of USEPA's Division of Environmental Science and Assessment (DESA). See Table 5 for locational data.

5.0 SITE SPECIFIC QUALITY ASSURANCE/QUALITY CONTROL PLAN

The objective of this QA/QC plan is to provide analytical results which are legally defensible in a court of law. The QA/QC plan incorporated procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results. Sampling procedures were conducted in accordance with USEPA protocols.

5.1 Sampling Equipment and Methods

Samples were collected at the locations and depths as described in this report. Procedural changes dictated by field conditions were fully documented in the field notes and the trip report.

Equipment utilized for this project were dedicated plastic scoops and spatulas.

All samples were transferred immediately after collection into sample bottles selected by parameter as listed below. Sample bottles used for this project were prepared in accordance with USEPA criteria for polychlorinated biphenyls (PCBs).

The type of sample container required for the Cornell Dubilier Electronics floodplain soil/sediment investigation were as follows:

- a. Polychlorinated Biphenyls - 8 oz. glass bottle with teflon closure.

All soil samples were packed on ice immediately following collection.

All samples were labeled with the following information:

- a. sample number;
- b. date and time of collection;
- c. site name;
- d. sample collector's initials;
- e. analyses required.

Accurate field notes were maintained which included the information listed above. Additional information included, but was not limited to:

- a. sample location sketch;
- b. sample method;
- c. general comments, including any modification from the sample plan.

5.2 Chain of Custody

Chain of custody was maintained for all samples. Chain of custody originated with the collection of the samples and was maintained until the samples were relinquished to the laboratory. The chain of custody form detailed the following information:

- a. sample identification number;
- b. sample collection date and time;
- c. sample matrix;
- d. expected contaminant concentration (low, medium, high);
- e. sample type (grab or composite);
- f. sample preservation;
- g. analytical parameters;
- h. name(s) and signatures(s) of sampler(s);
- i. signatures(s) of individual(s) with control over samples.

5.3 Quality Assurance/Quality Control Samples

The matrix for all samples included in this investigation was soil/sediment. QA/QC samples included the collection of one (1) field duplicate and one (1) matrix spike/matrix spike duplicate sample for each matrix (soil/sediment) per sampling date at a ratio of one (1) per twenty (20) samples. Extra volume was submitted to allow the laboratory to perform matrix spike sample analysis. This analysis provides information about the effect of sample matrix digestion and measurement methodology. Field duplicate samples provide an indication of sample homogeneity and were not identified to the laboratory.

5.4 Sample QA/QC Data

A CLP format deliverable QA/QC package was provided for all samples submitted for analysis.

6.0 DATA VALIDATION

Data was evaluated in accordance with Region II guidelines using the following data validation SOP: SOP HW-6, "USEPA Region II Data Validation SOP for Statement of Work OLCO 3.2, Rev.11, June 1996". Laboratory analytical results were assessed by the data reviewer for compliance with required precision, accuracy, completeness, representativeness, and sensitivity.

Data validation was performed by ESAT, Region II under the USEPA Contract Laboratory Program. Data validation results indicate that the analytical results are valid and acceptable. For specific comments, see the Data Validation Results included as Appendix 3.

TABLE - 1 PCB DATA (Area 1)

SITE NAME: Cornell - Dubiller Electronics

SAMPLING DATE: June 21, 1999

UNITS: ug/kg (unless otherwise indicated)

Matrix Sample ID #	Soil A1-01	Soil A1-02	Soil A1-03	Soil A1-04	Soil A1-05	Soil A1-06	Soil A1-07	Soil A1-08	Soil A1-09	Soil A1-10	Soil A1-11
CLP Sample #	BWZ-06	BWZ-07	BWZ-08	BWZ-09	BWZ-10	BWZ-11	BWZ-12	BWZ-13	BWZ-14	BWZ-15	BWZ-16
Lab ID #	39092.01	39092.02	39092.03	39092.04	39092.05	39092.06	39092.07	39092.08	39092.09	39092.10	39092.11
Percent Moisture	20	12	7	15	12	12	8	12	6	10	9
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1
PCB											
Aroclor-1016	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U
Aroclor-1221	82 U	74 U	68 U	74 U	75 U	76 U	68 U	70 U	69 U	72 U	72 U
Aroclor-1232	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U
Aroclor-1242	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U
Aroclor-1248	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U
Aroclor-1254	300 J	280 J	240 J	1300	82 JN	480	150 J	540	120 JN	170 J	120 J
Aroclor-1260	40 U	36 U	33 U	36 U	37 U	37 U	34 U	35 U	34 U	35 U	35 U
Total PCB (mg/kg)	0.30 J	0.28 J	0.24 J	1.3	0.082 JN	0.48	0.15 J	0.54	0.12 JN	0.17 J	0.12 J

Matrix Sample ID #	Soil A1-12	Soil A1-13	Soil A1-14	Soil A1-15	Soil A1-16	Soil A1-17	Soil A1-18	Soil A1-19	Soil A1-20	Soil A1-21	Soil A1-22
CLP Sample #	BWZ-17	BWZ-18	BWZ-19	BWZ-20	BWZ-21	BWZ-22	BWZ-23	BWZ-24	BWZ-25	BWZ-26	BWZ-27
Lab ID #	39092.12	39092.13	39092.14	39092.15	39092.16	39092.17	39092.18	39092.19	39092.20	39092.21	39092.22
Percent Moisture	11	12	8	12	7	8	16	14	20	9	17
Dilution Factor	1	1	1	1	1	1	10	10	1	1	1
PCB											
Aroclor-1016	34 U	36 U	36 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U
Aroclor-1221	69 U	73 U	72 U	76 U	72 U	71 U	780 U	770 U	84 U	73 U	77 U
Aroclor-1232	34 U	36 U	36 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U
Aroclor-1242	34 U	36 U	36 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U
Aroclor-1248	34 U	36 U	210 J	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U
Aroclor-1254	310	84	170	380	190 J	200	5500	6300	1600	1000 D	290
Aroclor-1260	34 U	36 U	36 U	38 U	35 U	35 U	380 U	380 U	41 U	36 U	38 U
Total PCB (mg/kg)	0.31	0.084 J	0.38 J	0.38	0.19 J	0.20	5.5	6.3	1.6	1.0 D	0.29

Matrix Sample ID #	Soil A1-23	Soil A1-24	Soil A1-25	Soil A1-26	Soil A1-27	Soil A1-28	Soil A1-29	Soil A1-30	Soil A1-31	Soil A1-32	Soil A1-33	Soil A1-34
CLP Sample #	BWZ-28	BWZ-29	BWZ-30	BWZ-31	BWZ-32	BWZ-33	BWZ-34	BWZ-35	BWZ-36	BWZ-37	BWZ-38	BWZ-39
Lab ID #	39092.23	39092.24	39092.25	39092.26	39092.27	39092.28	39092.29	39092.30	39092.31	39092.32	39092.33	39092.34
Percent Moisture	16	5	11	10	13	8	16	10	13	8	9	9
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1	1
PCB												
Aroclor-1016	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1221	80 U	70 U	72 U	72 U	74 U	73 U	78 U	74 U	75 U	69 U	69 U	69 U
Aroclor-1232	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1242	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1248	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Aroclor-1254	21000 D	6400 D	6600 D	25000 D	3100 D	120	190	120	2700 D	720 J	740 J	34 U
Aroclor-1260	39 U	34 U	36 U	35 U	36 U	36 U	39 U	37 U	37 U	34 U	34 U	34 U
Total PCB (mg/kg)	21 D	6.4 D	6.6 D	25 D	3.1 D	0.12	0.19	0.12	2.7 D	0.72 J	0.74 J	U

U - Non-detected compound.

UJ- Analyte was not detected. The reported quantitation limit is qualified estimated.

J - Estimated Value

JN - Presumptive evidence of a compound at an estimated value.

D- From Dilution

906202

TABLE - 2 PCB DATA (Area 2)

SITE NAME: Cornell - Dubilier Electronics

SAMPLING DATE: June 22, 1999

UNITS: ug/kg (unless otherwise indicated)

Matrix Sample ID # CLP Sample # Lab ID # Percent Moisture Dilution Factor	Soil A2-01 BWZ-43 39116.01 16 1	Soil A2-02 BWZ-44 39116.02 9 1	Soil A2-03 BWZ-45 39116.03 20 1	Soil A2-04 BWZ-46 39116.04 23 1	Soil A2-05 BWZ-47 39116.05 18 1	Soil A2-06 BWZ-48 39116.06 21 1	Soil A2-07 BWZ-49 39116.07 21 1	Soil A2-08 BWZ-50 39116.08 36 10	Soil A2-09 BWZ-51 39116.09 39 10	Soil A2-10 BWZ-52 39116.10 26 10	Soil A2-11 BWZ-53 39116.11 22 10
PCB											
Aroclor-1016	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1221	77 U	68 U	81 U	86 U	80 U	82 U	82 U	980 U	1000 U	880 U	880 U
Aroclor-1232	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1242	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1248	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Aroclor-1254	580 D	120	780 D	95	880 D	730 D	940 D	1100 J	800 J	1100	1000
Aroclor-1260	38 U	34 U	40 U	42 U	40 U	40 U	40 U	480 U	510 U	430 U	420 U
Total PCB (mg/kg)	0.58 D	0.12	0.78 D	0.095	0.88 D	0.73 D	0.94 D	1.1 J	0.8 J	1.1	1

Matrix Sample ID # CLP Sample # Lab ID # Percent Moisture Dilution Factor	Soil A2 - 12 BWZ-54 39116.12 23 10	Soil A2 - 13 BWZ-55 39116.13 19 10	Soil A2 - 14 BWZ-56 39116.14 22 10	Soil A2 - 15 BWZ-57 39116.15 24 10	Soil A2 - 16 BWZ-58 39116.16 30 10	Soil A2 - 17 BWZ-59 39116.17 26 10	Soil A2 - 18 BWZ-60 39116.18 21 10	Soil A2 - 19 BWZ-61 39116.19 46 10	Soil A2 - 20 BWZ-62 39116.20 41 10	Soil A2-21 BWZ-63 39116.21 26 1
PCB										
Aroclor-1016	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1221	860 U	820 U	800 U	850 U	940 U	860 U	840 U	1200 U	1100 U	89 U
Aroclor-1232	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1242	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1248	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Aroclor-1254	1000	380 J	670 J	850	320 J	2000	60 J	580 J	180 J	480 DJ
Aroclor-1260	420 U	410 U	400 U	420 U	460 U	430 U	410 U	610 U	550 U	44 U
Total PCB (mg/kg)	1	0.38 J	0.67 J	0.85	0.32 J	2	0.06 J	0.58 J	0.18 J	0.48 DJ

U - Non-detected compound.

UJ- Analyte was not detected. The reported quantitation limit is qualified estimated.

J - Estimated Value

JN - Presumptive evidence of a compound at an estimated value.

D- From Dilution

202907

TABLE - 3 PCB DATA (Area 3)

SITE NAME: Cornell - Dubilier Electronics

SAMPLING DATE: June 23, 1999

UNITS: ug/kg (unless otherwise indicated)

Matrix Sample ID # CLP Sample # Lab ID # Percent Moisture Dilution Factor	Soil A3-01 BWZ-64 39129.01 25 10	Soil A3-02 BWZ-65 39129.02 25 10	Soil A3-03 BWZ-66 39129.03 35 10	Soil A3-04 BWZ-67 39129.04 23 10	Soil A3-05 BWZ-68 39129.05 38 10	Soil A3-06 BWZ-69 39129.06 26 10	Soil A3-07 BWZ-70 39129.07 47 10	Soil A3-08 BWZ-71 39129.08 23 10	Soil A3-09 BWZ-72 39129.09 33 10	Soil A3-10 BWZ-73 39129.10 30 10	Soil A3-11 BWZ-74 39129.11 18 10
PCB											
Aroclor-1016	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U
Aroclor-1221	890 U	860 U	1000 U	800 U	1100 U	870 U	1200 U	860 U	970 U	950 U	810 U
Aroclor-1232	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U
Aroclor-1242	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U
Aroclor-1248	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U
Aroclor-1254	4600	4700	4000	4500	3400	3700	3800	4900	3800	4400	5200
Aroclor-1260	440 U	420 U	510 U	400 U	530 U	430 U	620 U	420 U	480 U	470 U	400 U
Total PCB (mg/kg)	4.6	4.7	4	4.5	3.4	3.7	3.8	4.9	3.8	4.4	5.2

Matrix Sample ID # CLP Sample # Lab ID # Percent Moisture Dilution Factor	Soil A3 - 12 BWZ-75 39129.12 30 10	Soil A3 - 13 BWZ-76 39129.13 29 10	Soil A3 - 14 BWZ-77 39129.14 28 10	Soil A3 - 15 BWZ-78 39129.15 26 10	Soil A3 - 16 BWZ-79 39129.16 33 10	Soil A3 - 17 BWZ-80 39129.17 61 10	Soil A3 - 18 BWZ-81 39129.18 26 10	Soil A3 - 19 BWZ-82 39129.19 55 10	Soil A3 - 20 BWZ-83 39129.20 19 10	Soil A3-21 BWZ-84 39129.21 25 10	Soil A3-22 BWZ-85 39129.22 34 10
PCB											
Aroclor-1016	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U
Aroclor-1221	930 U	940 U	900 U	890 U	1000 U	1600 UJ	890 U	1500 UJ	760 U	890 U	980 U
Aroclor-1232	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U
Aroclor-1242	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U
Aroclor-1248	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U
Aroclor-1254	5800	5900	7500	4000	5000	4200 J	4700	4100 J	5700	2500	2700
Aroclor-1260	460 U	460 U	440 U	440 U	490 U	820 UJ	440 U	720 UJ	380 U	440 U	480 U
Total PCB (mg/kg)	5.8	5.9	7.5	4	5	4.2 J	4.7	4.1 J	5.7	2.5	2.7

Matrix Sample ID # CLP Sample # Lab ID # Percent Moisture Dilution Factor	Soil A3 - 23 BWZ-86 39129.23 68 10	Soil A3 - 24 BWZ-87 39129.24 68 10	Soil A3 - 25 BWZ-88 39129.25 31 10	Soil A3 - 26 BWZ-89 39129.26 52 10	Soil A3 - 27 BWZ-90 39129.27 29 10	Soil A3 - 28 BWZ-91 39129.28 55 10
PCB						
Aroclor-1016	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1221	2100 UJ	1900 UJ	940 U	1400 U	920 U	1400 U
Aroclor-1232	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1242	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1248	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Aroclor-1254	3700 J	3200 J	3000 J	6000 J	2900 J	3100 J
Aroclor-1260	1000 UJ	950 UJ	460 U	670 U	450 U	710 U
Total PCB (mg/kg)	3.7 J	3.2 J	3 J	6 J	2.9 J	3.1 J

U - Non-detected compound.

UJ- Analyte was not detected. The reported quantitation limit is qualified estimated.

J - Estimated Value

JN - Presumptive evidence of a compound at an estimated value.

D- From Dilution

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TABLE - 4 PCB DATA (Area 4)

SITE NAME: Cornell - Dubilier Electronics

SAMPLING DATE: June 21, 1999

UNITS: ug/kg (unless otherwise indicated)

Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample ID #	A4-01	A4-02	A4-03	A4-04	A4-05	A4-06	A4-07	A4-08	A4-09	A4-10	A4-11
CLP Sample #	BWZ-96	BWZ-97	BWZ-98	BWZ-99	BXA-00	BXA-01	BXA-02	BXA-03	BXA-04	BXA-05	BXA-06
Lab ID #	39116.22	39116.23	39116.24	39116.25	39116.26	39116.27	39116.28	39116.29	39116.30	39116.31	39116.32
Percent Moisture	27	6	16	10	9	8	9	9	7	5	9
Dilution Factor	1	1	1	1	1	1	1	1	1	1	1
PCB											
Aroclor-1016	45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U	35 U
Aroclor-1221	91 U	70 U	80 U	73 U	73 U	72 U	73 U	73 U	72 U	69 U	72 U
Aroclor-1232	45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U	35 U
Aroclor-1242	45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U	35 U
Aroclor-1248	45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U	35 U
Aroclor-1254	45 U	35 U	80 J	100 J	60 J	36 U	74 J	130 J	98 J	55 J	96 J
Aroclor-1260	45 U	35 U	39 U	36 U	36 U	36 U	36 U	36 U	35 U	34 U	35 U
Total PCB (mg/kg)	U	U	0.08 J	0.1 J	0.06 J	U	0.074 J	0.13 J	0.098 J	0.055 J	0.096 J

Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample ID #	A4 - 12	A4 - 13	A4 - 14	A4 - 15	A4 - 16	A4 - 17	A4 - 18	A4 - 19	A4 - 20	A4 - 21
CLP Sample #	BXA-07	BXA-08	BXA-09	BXA-10	BXA-11	BXA-12	BXA-13	BXA-14	BXA-15	BXA-16
Lab ID #	39116.33	39116.34	39116.35	39116.36	39116.37	39116.38	39116.39	39116.40	39116.41	39092.42
Percent Moisture	7	12	13	12	15	15	12	9	24	18
Dilution Factor	1	1	1	1	1	1	1	1	1	1
PCB										
Aroclor-1016	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1221	68 U	76 U	76 U	74 U	76 U	77 U	74 U	72 U	88 U	79 U
Aroclor-1232	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1242	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1248	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Aroclor-1254	93 J	38 U	140 J	210	140 J	130 J	36 U	40	55	39 U
Aroclor-1260	34 U	38 U	38 U	37 U	37 U	38 U	36 U	35 U	43 U	39 U
Total PCB (mg/kg)	0.093 J	U	0.14 J	0.21	0.14 J	0.13 J	U	0.04	0.055	U

U - Non-detected compound.

UJ- Analyte was not detected. The reported quantitation limit is qualified estimated.

J - Estimated Value

JN - Presumptive evidence of a compound at an estimated value.

D- From Dilution

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Table 5
GPS Points for cornell-Dubilier Site
Table References Coordinates for
Geographic, WGS84 Projection (Decimal Degrees)
and
NJ State Plane, WGS 84 Projection (feet)

SITE_NAME	POINT_ID	COMMENT	MAD_LAT_DD	MAD_LON_DD	X_COORD NJ State Plane (ft)	Y_COORD NJ State Plane (ft)
Area 1	C1	POLE 6309 SPF	40.580044	-74.415561	515577.94875	636217.99593
Area 1	C2	POLE 7855	-40.581350	-74.415550	515580.57492	636693.50270
Area 2	C1	CENTER LINE CEDEAR BROOK	40.581962	-74.417695	514984.63721	636916.08732
Area 2	C2		40.581787	-74.418741	514694.09647	636851.95905
Area 2	C3		40.581703	-74.419535	514473.59495	636821.14425
Area 4	C1	POLE 63498 SPF	40.579098	-74.424783	513016.91634	635870.89595
Area 4	C2		40.578413	-74.425293	512875.48703	635621.27572
Area 3	C1	AT STREAM 14-14-2-3	40.580933	-74.424671	513047.35671	636539.58521
Area 3	C2		40.580924	-74.425752	512747.22419	636536.02086
Area 3	C3		40.581156	-74.426770	512464.24132	636620.09911
Area 3	C4		40.581358	-74.427821	512172.38676	636693.63551

Notes: Points Collected with Trimble Pro XR GPS unit. Points were differentially corrected using Trimble Pathfinder Software. Corrected points were exported to ArcView Shapefile, in geographic projection and WGS datum. Exported Shapefile was then reprojected (using ArcView reproduction tool) into NJ State Plane (feet), WGS84 datum. From there, an ArcView Script (View_AddXYCoordTOFTab) was loaded compiled, and run on the Feature Table (Ftab) of the reprojected shapefile. The above table is an imput of selected fields of the final Ftab.

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APPENDIX 1
SITE MAPS/FIGURES